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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,783	02/28/2002	Philip I. Straub	1528.016US1	8987

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EXAMINER
GIBSON, ERIC M

ART UNIT	PAPER NUMBER
3661	

DATE MAILED: 06/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/086,783	STRAUB ET AL.	
	Examiner	Art Unit	
	Eric M Gibson	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7 and 9-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7 and 9-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1, 2, 4, 6, 7, 14 15, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Bollard et al. (US004845495A) in view of Woodgate et al. (US005917562A) and Hayes et al. (US006112140A).

a. As per claim 1, Bollard teaches a bezel having controls located thereon for controlling communication devices, navigational devices and equipment sensors (12B, figure 1) and a display adjacent to the bezel (12A, figure 1) adapted to provide a backup presentation of the flight information upon the failure of a primary display (column 3, lines 15-21). Bollard does not teach that the display is a "reversionary" display. Woodgate teaches an invention relative to the state of the art of displays. Specifically, Woodgate teaches that a reversionary display may be used so that the display may be viewed at a wide range of angles (column 18, lines 60-67). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use a "reversionary" display in the invention of Bollard, in order to allow the display to be viewed at a wide range of angles, as taught by Woodgate. The combination of Bollard and Woodgate does not teach that the backup display is "automatically" provided. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display

and that automatically providing the display on a backup unit would relieve this burden (column 4, lines 50-56). It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

b. As per claim 2, Bollard teaches displaying engine parameters, cautions and warnings, and current and future aircraft system status along with avionics systems and aircraft systems control functions (column 2, lines 3-10).

c. As per claim 4, it is inherent in the invention of Bollard that the system be configured for the specific application of airframe and engine.

d. As per claim 6, Bollard teaches that the display contents are selectable via keys around the display (column 4, lines 12-18).

e. As per claim 7, Bollard teaches redundant first and second instrument panels (12, 14, figure 1) with first and second bezels (12B, 14B, figure 1) and first and second displays (12A, 14A, figure 1) wherein the first and second instrument panels are adapted to provide backup information in the event of a failure (column 3, lines 15-21). Bollard does not teach that the display is a "reversionary" display. Woodgate teaches an invention relative to the state of the art of displays. Specifically, Woodgate teaches that a reversionary display may be used so that the display may be viewed at a wide range of angles (column 18, lines 60-67). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use a "reversionary" display in the invention of Bollard, in order to allow the display to be viewed at a wide range of angles, as taught by Woodgate. The combination of Bollard and Woodgate does not teach that the

backup display is provided in a substantially similar format size, location and perspective. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display and that automatically providing the display on a redundant backup unit would relieve this burden (column 4, lines 50-56). It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

f. As per claim 11, the displays in Bollard are multifunction displays (column 2, line 44).

g. As per claim 14, Bollard teaches that the controls are fixed function and line select keys for engine parameters, cautions and warnings, and current and future aircraft system status along with avionics systems and aircraft systems control functions (column 2, lines 3-10).

h. As per claim 15, Bollard teaches primary and secondary flight displays (12A, 14A, figure 1) wherein the first and second instrument panels are adapted to provide full flight information (column 3, lines 15-21). Bollard does not teach that the display is a "reversionary" display. Woodgate teaches an invention relative to the state of the art of displays. Specifically, Woodgate teaches that a reversionary display may be used so that the display may be viewed at a wide range of angles (column 18, lines 60-67). It would have been obvious to one of ordinary skill in the art, at the time of

invention, to use a "reversionary" display in the invention of Bollard, in order to allow the display to be viewed at a wide range of angles, as taught by Woodgate. The combination of Bollard and Woodgate does not teach that the backup display is "automatically" provided. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display and that automatically providing the display on a backup unit would relieve this burden (column 4, lines 50-56). It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

i. As per claim 17, Bollard further teaches displaying engine parameters, cautions and warnings, and current and future aircraft system status along with avionics systems and aircraft systems control functions (column 2, lines 3-10).

j. As per claim 19, it is inherent in the invention of Bollard that the system be configured for the specific application of airframe and engine.

2. Claims 1, 2, 4-7, 9-28 are rejected under 35 U.S.C. 102(b) as being anticipated by the Honeywell Primus Epic (Epic) avionics system (Al Ditter, An Epic in the Making, Commuter World, December 1996-January 1997, pages 16, 18-21; William B. Scott, Pentium Powers 'Epic' Integrated Avionics, Aviation Week & Space Technology, November 18, 1996, pages 67-69; James Holahan, LCDs, Mice on the Flight Deck!, Aviation International News, November 1, 1996, pages 56-58; Fred George, Introducing

Primus Epic, Business & Commercial Aviation, November 1996, pages 116, 118-120) in view of Woodgate et al. (US005917562A) and Hayes et al. (US006112140A).

a. As per claim 1, the Epic system teaches a MFD including a bezel having controls thereon adapted for controlling communications devices, navigational devices, and equipment sensors (Epic contemplates both "soft keys" and "hard keys" for input, see Holahan at p. 56) and a display adapted to provide a backup presentation of important flight data (see photo Ditter at p. 16 showing identical displays on left and right). The Epic system does not teach that the display is a "reversionary" display. Woodgate teaches an invention relative to the state of the art of displays. Specifically, Woodgate teaches that a reversionary display may be used so that the display may be viewed at a wide range of angles (column 18, lines 60-67). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use a "reversionary" display in the Epic invention, in order to allow the display to be viewed at a wide range of angles, as taught by Woodgate. The combination of Epic and Woodgate does not teach that the backup display is "automatically" provided. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display and that automatically providing the display on a backup unit would relieve this burden (column 4, lines 50-56). It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

b. As per claim 2, Epic includes navigation, communication and other relevant avionic data (see Holahan at p. 56).

c. As per claim 4, Epic is programmable per individual application (Holahan at p. 58).

d. As per claim 5, the Epic system switches display screens through the "toggle" of a soft key on the screen (Holahan at p. 56).

e. As per claim 6, the Epic system is dynamically configurable through selection of the various menus.

f. As per claim 7, the Epic system includes anywhere from 2-6 displays (Ditter at p. 19) which each include "soft keys" on the display to allow the user to select the display contents. Epic does not teach that the display is a "reversionary" display. Woodgate teaches an invention relative to the state of the art of displays. Specifically, Woodgate teaches that a reversionary display may be used so that the display may be viewed at a wide range of angles (column 18, lines 60-67). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use a "reversionary" display in the invention of Bollard, in order to allow the display to be viewed at a wide range of angles, as taught by Woodgate. The combination of Epic and Woodgate does not teach that the backup display is provided in a substantially similar format size, location and perspective. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display and that automatically providing the display on a

redundant backup unit would relieve this burden (column 4, lines 50-56). It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

g. As per claim 9, the Epic system is able to change display screens through the "toggle" of a soft key on the screen (Holahan at p. 56).

h. As per claim 10, see photo Ditter at p. 16 showing identical displays on left and right.

i. As per claim 11, the Epic system includes MFDs (see Holahan p. 57).

j. As per claim 12, the displays in the Epic system include NAV displays (see figures 1-6, Ditter).

k. As per claim 13, the Epic system shows the displays side-by-side (see photo Ditter at p. 16) and further contemplates voice actuation, which necessitates audio instrumentation (Ditter at p. 20).

l. As per claim 14, the Epic system includes standard controls (see Holahan p. 57).

m. As per claim 15, the Epic system includes anywhere from 2-6 displays (Ditter at p. 19) which each include "soft keys" on the display to allow the user to select the display contents. There is no explicit teaching that the display is a "reversionary" display. Woodgate teaches an invention relative to the state of the art of displays. Specifically, Woodgate teaches that a reversionary display may be used so that the display may be viewed at a wide range of angles (column 18, lines 60-67). It would

have been obvious to one of ordinary skill in the art, at the time of invention, to use a "reversionary" display in the invention of Bollard, in order to allow the display to be viewed at a wide range of angles, as taught by Woodgate. The combination of Epic and Woodgate does not teach that the backup display is "automatically" provided. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display and that automatically providing the display on a backup unit would relieve this burden (column 4, lines 50-56). It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

n. As per claim 16, the Epic system is able to change display screens through the "toggle" of a soft key on the screen (Holahan at p. 56).

o. As per claim 17, Epic includes navigation, communication and other relevant avionic data (see Holahan at p. 56).

p. As per claims 18 and 19, Epic is programmable per individual application (Holahan at p. 58).

q. As per claim 20, Epic further contemplates voice actuation, which necessitates audio instrumentation (Ditter at p. 20).

r. As per claim 21, the Epic system includes anywhere from 2-6 displays (Ditter at p. 19) which each include "soft keys" on the display to allow the user to select the display contents. The Epic system does not teach that the display is a "reversionary"

display. Woodgate teaches an invention relative to the state of the art of displays. Specifically, Woodgate teaches that a reversionary display may be used so that the display may be viewed at a wide range of angles (column 18, lines 60-67). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use a "reversionary" display in the Epic invention, in order to allow the display to be viewed at a wide range of angles, as taught by Woodgate. The combination of Epic and Woodgate does not teach that the backup display is provided in a substantially similar format size, location and perspective. Hayes teaches a flight management system providing for automatic control display unit backup utilizing structured data routing. Hayes teaches that in the prior art systems the failure of one display would cause an undue burden on the pilot with the remaining operative display and that automatically providing the display on a redundant backup unit would relieve this burden (column 4, lines 50-56). It would have been obvious to one of ordinary skill in the art, at the time of invention, to automatically reroute the data to a redundant display in the system, in order to reduce the burden on the pilot, as taught by Hayes.

s. As per claim 22, the many displays in the Epic system may be used as PFD and NAV (see figures 1-6, Ditter).

t. As per claim 23, the Epic system shows the displays side-by-side (see photo Ditter at p. 16).

u. As per claim 24, Epic includes navigation, communication and other relevant avionic data (see Holahan at p. 56).

v. As per claim 25, Epic is programmable per individual application (Holahan at p. 58).

w. As per claim 26, the displays in Epic are of the same size and each is capable of displaying the same information selected from the menu (see photo Ditter at p. 16).

x. As per claim 27, the Epic system is dynamically configurable through selection of the various menus.

y. As per claim 28, Epic contemplates both "soft keys" and "hard keys" for input (see Holahan at p. 56).

Response to Arguments

3. Applicant's arguments with respect to claims 1, 2, 4-7, and 9-28 have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.

a. As per applicant's amended limitation that the display is reconfigured "automatically," the teaching of Hayes has been cited to teach this limitation.

b. As per applicant's amended limitation that the display is "reversionary (as defined by the Applicant's specification)," the Examiner did not find a definition in the specification that contradicts the teaching of the "reversionary" display as taught by the cited reference Woodgate. Therefore, it is assumed that the "reversionary" display of the present invention is that as defined in the prior art.

c. As per applicant's amended limitation that the display provides "communication, navigation, and equipment sensor settings," this data is typical of the state of the art in aircraft display systems.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M Gibson whose telephone number is (703) 306-4545. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on (703) 308-3873. The fax phone

numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

WILLIAM A. CUCHLINSKI, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

EMG
June 18, 2003